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COUNTRY ANALYSIS BRIEFS

# South Africa

Last Updated: October 2008

## Background

***South Africa is a significant coal exporter but imports large amounts of oil and some natural gas.***

South Africa has only small deposits of oil and natural gas and relies on coal production for most of its energy needs. The country has a highly developed synthetic fuels industry, mainly derived from coal. South Africa's economy is structured around large-scale, energy-intensive mining and primary minerals industries, pushing its energy intensity to above average levels, with only 10 other countries having higher commercial primary energy intensities. South Africa's energy sector is critical to the economy, contributing about 15 percent of the country's gross domestic product (GDP). Due to its large coal deposits, South Africa is one of the cheapest electricity suppliers in the world. Although the cost of electricity in South Africa is among the worlds lowest, strong economic growth, rapid industrialization and a mass electrification program led to demand for power outstripping supply in early 2008. The recent power supply crisis has accelerated recognition of the need to diversify the energy mix, such as nuclear power and natural gas, as well as various forms of renewable energy.

Economic problems remain from the apartheid era, especially poverty and lack of economic empowerment among the disadvantaged groups. The South African government has committed to ensuring that black-owned companies have access to the energy sector. Under its black economic empowerment (BEE) program, the South African government has set targets of 25 percent BEE ownership of energy companies by 2014. Large, predominately white-owned corporations have been selling assets to achieve this objective, with the first sale occurring in 2000. BEE firms are commonly referred to as "empowerment" firms.

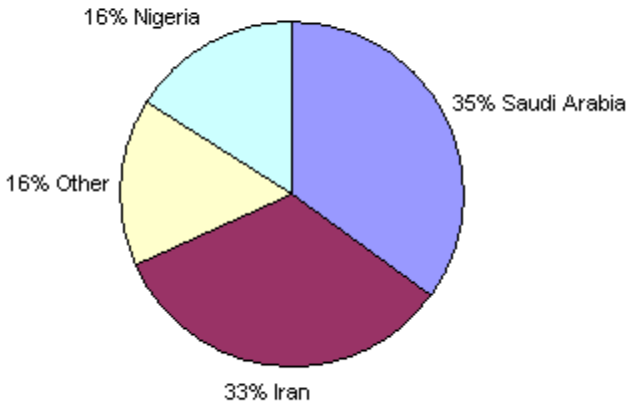

## Oil

***South Africa has the second largest oil refinery system in Africa. The country imports the majority of crude oil used in refining from the Middle East.***

According to Oil and Gas Journal (OGJ), South Africa had proven oil reserves of 15 million barrels as of January 2008. All of the proven reserves are located offshore southern South Africa in the Bredasdorp basin and off the west coast of the country near the border with Namibia. In 2007, South Africa produced 199,000 barrels per day (bbl/d) of oil, of which about 16,000 bbl/d was crude and 160,000 bbl/d was synthetic liquids processed from coal and natural gas. About 66 percent of South Africa's total crude oil consumption is imported: in 2007, South Africa consumed 505,000 bbl/d of oil, of which 306,000 bbl/d was imported. According to the South African

Petroleum Industries Association (SAPIA), the majority of crude oil imports destined for South African refineries come from the Middle East, with Iran and Saudi Arabia being the country's chief suppliers. South Africa also imports crude oil from Nigeria and Angola, among others.

**South Africa Crude Oil Imports 2006**



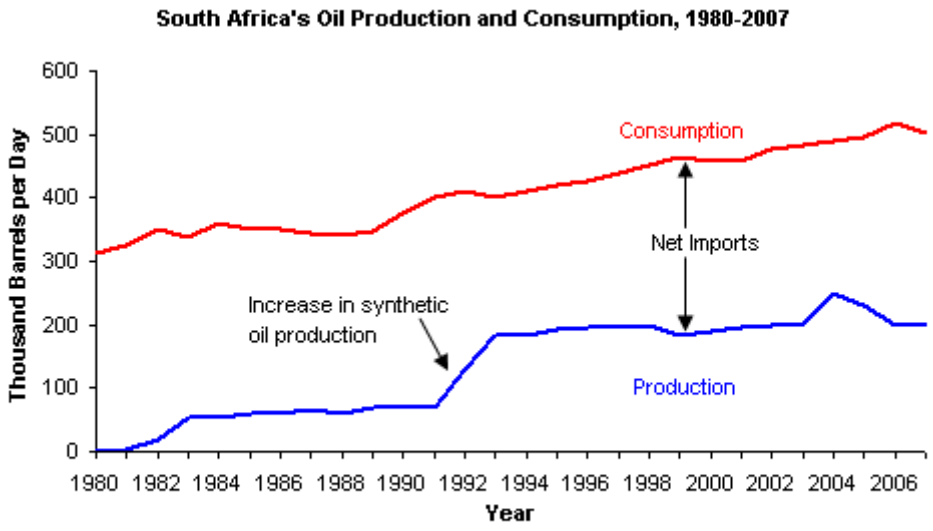

Source: South Africa Petroleum Industries Association

## Sector Organization

The National Energy Regulator of South Africa (NERSA), created in 2005, regulates policy over the entire South African energy industry and is responsible for implementing South Africa's energy plan. South Africa also has a national oil and natural gas company, the Petroleum Oil and Gas Corporation of South Africa (PetroSA), which is responsible for managing and promoting the licensing of oil and natural gas exploration in the country. This includes both onshore and offshore exploration. International oil companies (IOCs) involved in South Africa' s upstream oil sector include Anschutz International, BHP Billiton, Forest Oil International, Shell, TotalFinaElf, Caltex and Pioneer Natural Resources.

## Production and Exploration

The most prolific of South Africa s exploration blocks is Block 9 in the Bredasdorp Basin. PetroSA has made several discoveries on the block, including the Oribi, Oryx and Sable fields. PetroSA and Energy Africa began producing oil in 1997 at the Oribi field, which was followed by the Oryx and Sable fields in 2000 and 2003, respectively. PetroSA holds 100 percent equity in the Oribi and Oryx fields. The Oribi and Oryx fields are produced from the Orca FPSO (Floating, Production, Storage and Offloading) facility. The Orca is situated 120 km South-West of Mossel Bay in a water depth of 118 meters. The Oribi and Oryx oil fields were the first commercial oil producing fields in South Africa. Total production in 2006 was 2,000 bbl/d, down from the previous year's total production of 3,000 bbl/d. The Sable oil field is located offshore South Africa about 150 kilometers South West of Mossel Bay. Sable is operated by PetroSA (60% interest) in a joint venture with Dallas-based Pioneer Natural Resources (40% interest). Net crude production from the Sable field for the financial year 2006/7 was 5,000 bbl/d compared with 8,000 bbl/d in 2005/6. Production in 2006/7 showed a decline of 37%, largely consistent with expected well performance.

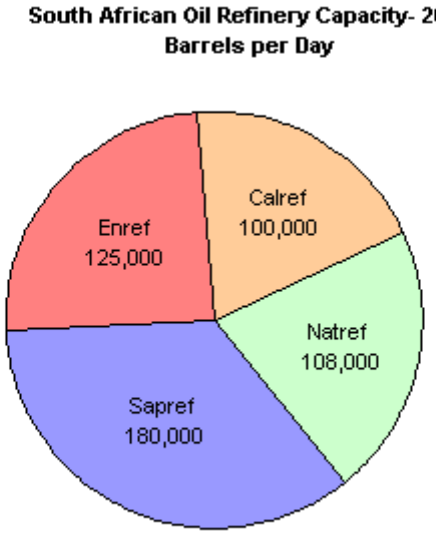



Source: EIA

South Africa would like to locate additional oil reserves and increase oil production in the country. In 2007, South Africa auctioned four offshore blocks off the western coast of South Africa for exploration as joint ventures with PetroSA. These ventures are in various states of progress. In addition, BHP-Billiton is in a joint venture with PetroSA to drill for oil in another offshore acreage also located off the western coast of South Africa.

## Refining and Downstream

South Africa has the second largest refining capacity in Africa (485,000 bbl/d), surpassed only by Egypt (726,250). South Africa's refined products are sold in the local market. Major refineries include Sapref (180,000 bbl/d) and Enref (125,000 bbl/d) in Durban, Calref (100,000 bbl/d) in Cape Town, and Natref (108,000 bbl/d) at Sasolburg (source for this refining data is SAPIA's Annual Report 2006).




Source: SAPIA Annual Report 2006

IOCs, including BP, Chevron, Engen, Shell, and Total are major participants in South Africa's downstream petroleum markets. Several domestic firms are also involved, including Naledi Petroleum and Afric Oil.

The Petroleum, Oil and Gas Corporation of South Africa (PetroSA) announced on March 18, 2008 that a pre-feasibility study into the planned crude oil refinery in Coega, Port Elizabeth, had been completed and that planning is well underway. Economics for the project look very encouraging and the World Bank recently has indicated support for the concept. Production is planned for a

product mix of up to 70 percent distillates (diesel & aviation fuel) and 30 percent high octane gasoline. These fuels will meet the highest Clean Fuels (Euro V) specifications. Bio-fuels and petrochemicals opportunities are also included in the design parameters. Capital costs for the 400,000 bbl/d base case are estimated at $11 billion. The Coega refinery is expected to come online by 2015.

On January 1, 2006 South Africa switched to unleaded fuels in motorized vehicles. Prior to the fuel switch, an estimated 60 percent of South African vehicles were leaded fuel users. The South African government, under the clean fuels policy, paid to have older vehicles adapted for unleaded fuel. In addition, diesel fuel used in South Africa after January 1, 2006 has ultra-low sulfur content of 0.005 - 0.05 percent.

The South African Department of Minerals and Energy (DME) Energy Master Plan supports an additional crude refinery to address the rapidly-increasing shortfall of locally refined products for the South African economy. Such a crude oil refinery would also assist in reducing the balance of payment pressures that result from South Africa's growing dependence on refined products imports. In support of the planned refinery and national supply network as laid out in the DME's Energy Master Plan, PetroSA's planning includes the provision of new oil terminal facilities and upgrades at Cape Town, Mossel Bay, Port Elizabeth, Durban and Gauteng.

### Refining of Synthetic Fuels from Natural Gas and Coal

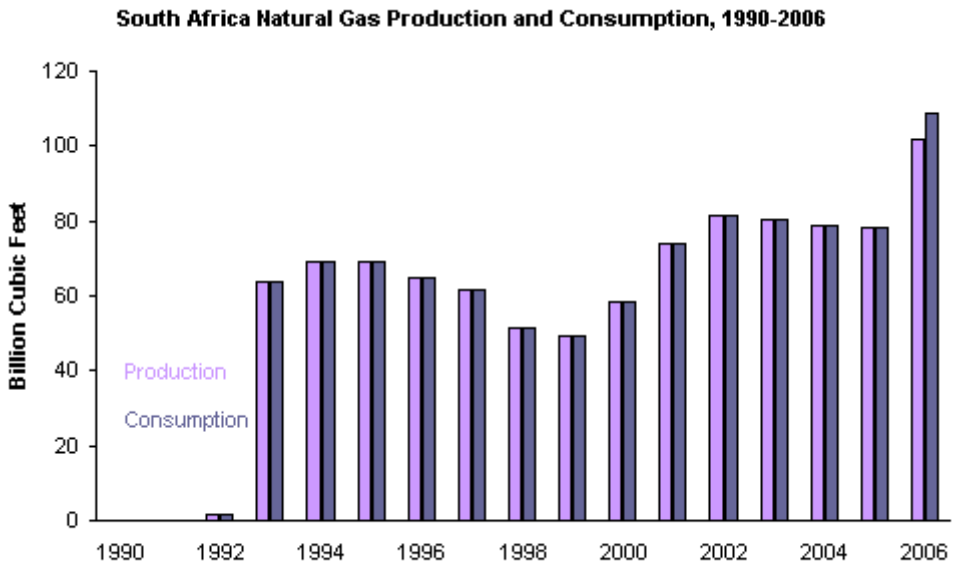
South Africa has a highly developed synthetic fuels industry, in which state company PetroSA and petrochemicals giant Sasol are the major players. PetroSA manages the country's commercial assets in the petroleum industry, including the world's largest commercial natural-gas-to-liquids plant at Mossel Bay in the Western Cape, with a capacity of 45,000 bbl/d.

Sasol, the biggest local company listed on South African stock market, produces synthetic fuels from low-grade coal and a small amount from natural gas. It operates the world's only coal-to-liquids synthetic fuels facility, and produces 36 percent of liquid fuels consumed in South Africa. Sasol produces automotive fuels for consumers, premium fuels and lubricants for industry, as well as jet fuel, fuel alcohol and illuminating kerosene. It also converts natural gas to more environmentally friendly fuels and chemicals, with a total capacity of 150,000 bbl/d.

## Natural Gas

***South Africa produces small amounts of natural gas, which it uses in synthetic fuel production.***

According to Cedigaz, South Africa had 318 billion cubic feet (Bcf) of proven natural gas reserves as of January 2008. In 2006, South Africa produced 102 Bcf, and consumed 109 Bcf, the 7 Bcf balance being in the form of imported Natural Gas Liquids (NGL). Much of South Africa's natural gas production is synthetic gas from coal. To compensate for the lack of large natural gas reserves, South Africa has developed natural gas supply agreements with neighbors Mozambique and Namibia. The South African government would like to locate additional natural gas reserves and has provided investment money for exploration in fields in Mossel Bay. Any recoverable natural gas reserves will be developed with the intent of extending the lifespan of the Mossel Bay gas-to-liquids (GTL) plant.




Source: *EIA*

PetroSA and Pioneer Natural Resources Co. are developing existing natural gas resources at Sable oil field and six adjacent undeveloped fields. PetroSA operates the project with 55% working interest and Pioneer holds 45 percent interest in the project. Pioneer's production from the project is sold to PetroSA under a gas and condensate sales agreement and will provide feedstock for PetroSA's onshore gas-to-liquids plant in Mossel Bay. Pioneer has started production from the South Coast Gas (SCG) project in block 9, offshore South Africa. Gas and condensate production from 5 wells was expected to reach approximately 50 million cubic feet per day (MMcf/d) by the end of 2007. Within 12-18 months, production from the project is expected to rise significantly as oil production operations are completed at the Sable field and Sable gas production is tied into the project. High oil prices have extended the production life of Sable field and gas will continue to be re-injected into the field to enhance oil recovery. Gas development drilling in the Sable field is complete. When Sable gas is tied in to SCG in late 2008 or early 2009, the project is expected to reach peak production of 100-120 MMcf/d. Gas condensate is expected to represent 20-30 percent of total SCG production.

In June 2008, PetroSA announced that it had discovered a new gas well off the southern Cape coast. The well is located 59 miles south-south-west of Mossel Bay at 311 feet water depth. PetroSA announced that this successful gas discovery well was drilled about 1 mile southwest of the known limits of the E-M field and has proved to be a new, previously untapped deposit of natural gas.

## Sector Organization

South Africa has numerous government agencies and companies involved in the natural gas industry, including iGas, PetroSA, Sasol, Petroleum Agency of South Africa and Petronet. The agencies and companies work to promote and develop natural gas exploration and production in South Africa. Sasol has interests in many other African countries, including a gas-to-liquids partnership in Nigeria and a cross-border pipeline linking the natural gas fields in Mozambique to Sasol's gas conversion plant at Secunda in South Africa's Mpumalanga province. Sasol plans to expand its gas-to-liquid operations at Secunda by 20 percent over the next eight years.

## Gas to Liquids Refinery

The development of the Fischer-Tropsch GTL facility at Mossel Bay began when StatoilHydro and PetroSA signed a cooperation agreement with a then 50/50 shareholding. The Mossel Bay site was chosen because syngas of the correct composition could easily be obtained from the nearby natural gas fields. In February 2002 a final investment decision was taken for the construction of the US$50 million plant with a production capacity of up to 1000 barrels per day of product (oils and waxes). Construction was completed in March 2004 and the unit went into production in May 2004. There were initial problems in obtaining separation between the catalyst and wax product which required extensive plant modifications to solve. The test program was thus delayed until July 2005 when significant breakthroughs in catalyst-wax separation were made. Various trial programs were conducted and in July 2006 the criteria for proof of concept (or demonstration phase 1) were achieved. Further modifications to the plant were made from October 2006 to July 2007 and the plant is now successfully operating under commercial operating conditions. For more information on the Mossel Bay plant see the Synthetic Fuel segment in the Oil section of the

South Africa Country Analysis Brief.

### Natural Gas Pipelines

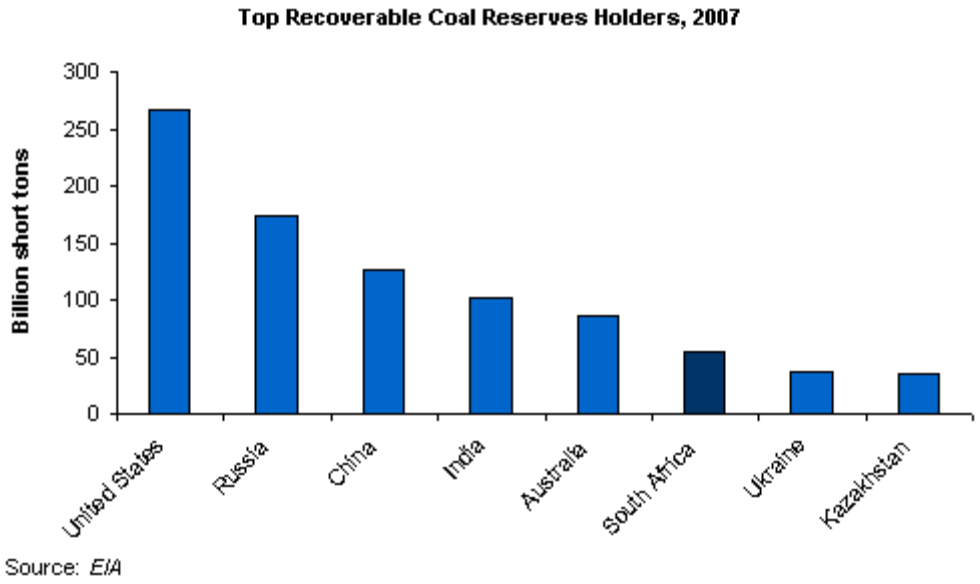
Natural gas from Mozambique is imported through a 537-mile transport pipeline, which Sasol, the South African government, and the government of Mozambique own through a joint venture. The pipeline has peak capacity of 524 MMcf/d of natural gas. In January 2008, Sasol said it would join the South African and Mozambican governments in investing a further U.S. $146.8 million to increase the pipeline's gas delivery capacity. The pipeline, part of a U.S. $1.2-billion natural gas project started in 2004, is designed to eventually be able to transport double its current capacity.

## Coal

***South Africa has the world□ s sixth largest recoverable coal reserves.***

South Africa's economy is heavily dependent on coal. Coal provides about 88 percent of total primary energy, supports about 90 percent of electricity generation, and provides feedstock for close to a third of the country's liquid fuels via Sasol's coal-to-liquids process. South Africa has the world's sixth largest recoverable coal reserves at 54 billion short tons, approximately 5 percent of the world total. Although South Africa has 19 official coal fields, 70 percent of recoverable reserves lie in just three -- Highveld, Waterberg, and Witbank. In 2007, South Africa produced 283 million short tons (Mmst), and consumed 203 Mmst. The vast majority of consumed coal is used in electricity generation and the synthetic fuel industry. Almost one-third of coal produced in South Africa is exported, with the primary importers being the European Union (Germany and Spain) and East Asia (Japan).

The coal-mining industry is highly concentrated, with six companies, Anglo Coal, BHP Billiton, Sasol Mining, Eyesizwe Coal, Kumba Coal, and Xstrata Coal accounting for 90 percent of coal production. Production and consumption of coal in South Africa have grown steadily over the past two and a half decades, at an average annual rate of 2.7 percent. In 2007, about 125 million tons or 64 percent was burned by Eskom in its power stations, with Sasol consuming another 47 million tons and industry and small consumers accounting for the remainder.




Source: *EIA*

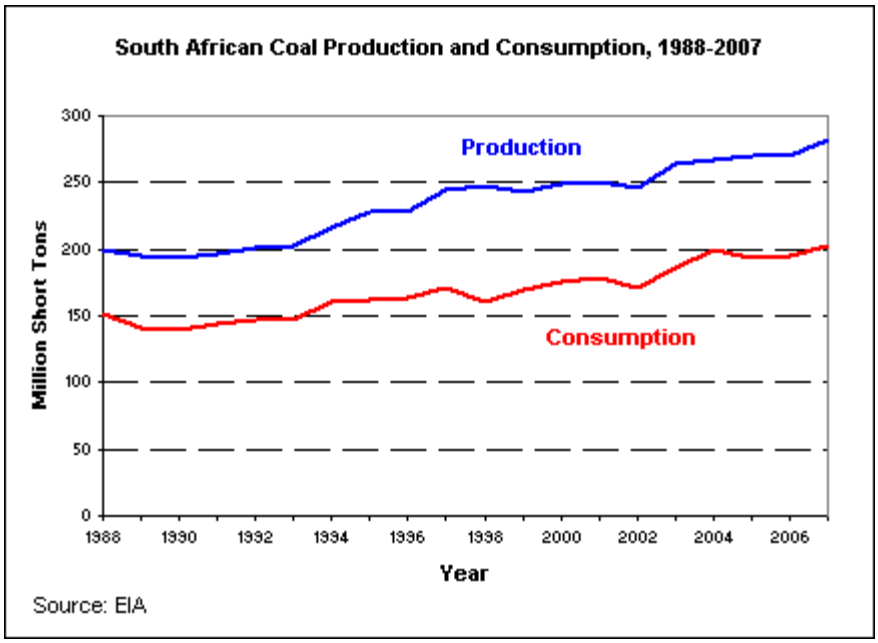
This growth in coal use especially by Eskom and Sasol is expected to continue or even accelerate over the next few years. Eskom is in the process of returning to service three coal-fired power stations (Camden, Grootvlei and Komati) with a combined capacity of 3,800 megawatts (MW). It has also begun construction of the new 4,800 MW Medupi power station, whose first unit is due to begin generation in 2012, while a second plant called Project Bravo (5,400 MW) scheduled to start generating power in 2013, was recently given the go-ahead. The combined consumption of these five power plants could raise Eskom's coal use by over 50 million tons, assuming they use the average amount of coal burned by existing power stations in 2007.

In July 2005, Anglo American's Isibonelo coal mine produced its first coal for shipment to Sasol s Segunda refinery. The $65 million project supplies 5 million short tons of thermal coal annually to Sasol Synthetic Fuels since reaching full production in late 2006. Anglo America and Sasol also announced plans to develop the Kriel South coalfield. Anglo will establish an operation on the northern portion of the field, and Sasol plans to expand its existing underground operations at the

Syferfontein coal mine. Coal from the two operations is expected to supply Sasol's refinery for the next 20 years. In May 2008, Sasol was in the planning stages of its proposed mine expansion at Twistdraai, adjacent to Syrfontain colliery. Coal reserves in this operation are estimated at 83 million tons, with an annual production rate of 4.15 million tons.

Environmental concerns pose the main challenge to coal as an energy source. In January 2007, Eskom successfully commissioned an underground coal-gasification pilot plant next to Majuba Power Station in Mpumalanga. The underground coal-gasification process produces a synthetic gas which is used as a fuel for either boilers or turbines.

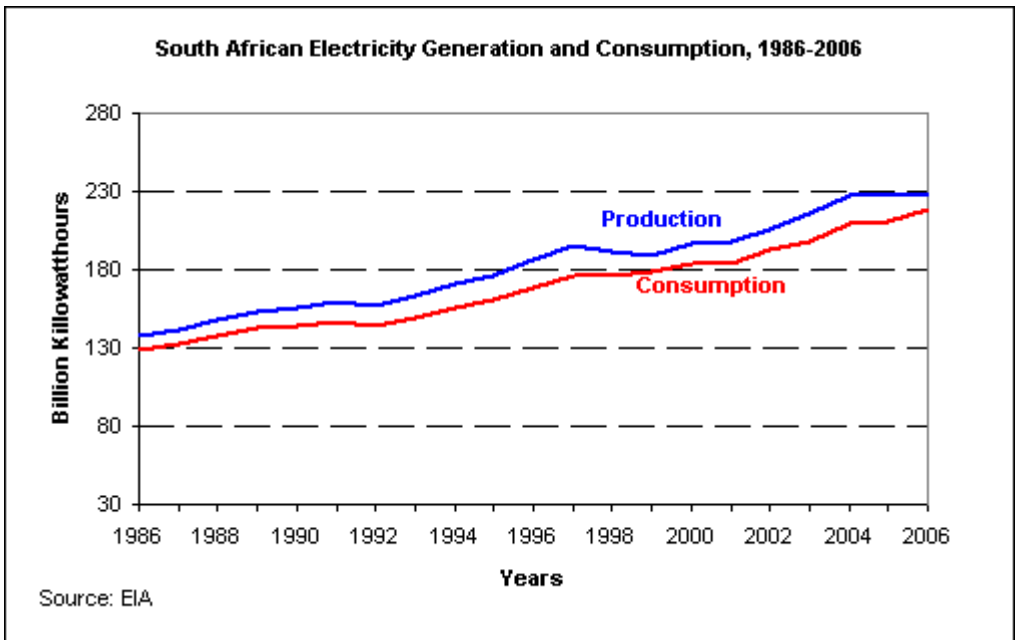
Eskom announced its intention to begin diversifying its primary energy mix by using less coal 5 years ago. By mid-2007, it was building open-cycle natural gas turbines at Atlantis and Mossel Bay, where 1,029 MW was expected to be commissioned. In addition, Eskom plans to build a 100-MW wind facility in the near future, pending licensing approvals, and will upgrade the Gariep Hydroelectric Power Station. Feasibility studies continue regarding other renewable energy and natural gas plant initiatives.




## Electricity

***South Africa embarks on ambitious new electricity expansion program to meet rising demand.***

In mid-January 2008, nationwide power outages occurred and lasted approximately four weeks. The economic costs of the outages are estimated to range from $253 million to $282 million with approximately half representing mining losses. Although the cost of electricity in South Africa is among the worlds lowest, the country's strong economic growth, rapid industrialization and a mass electrification program has led to demand for power outstripping supply.




In January 2008, the Department of Minerals and Energy and Eskom released a new policy document. National response to South Africa's electricity shortage . The plan includes work on the country's electricity distribution structure and the fast-tracking of electricity projects by independent power producers. It also involves electricity co-generation projects between Eskom and private industry, where the heat generated as a by-product of industrial processes in sectors such as chemicals is captured to produce power that can be used by the industries themselves, or bought by Eskom for the national grid. At the same time, the new plan outlines the importance of reducing demand by pricing electricity correctly as well as promoting energy efficiency and deterring energy inefficiency. Eskom aims to reduce demand by about 3,000 MW by 2012 and a further 5,000 MW by 2025 through an aggressive campaign which will includes promoting the use of solar-powered geysers as well as liquid petroleum gas for cooking.

Eskom has embarked on a massive program to upgrade and expand the country s electricity infrastructure. The building of new capacity, in the form of reopening 3 power stations that were mothballed in the 1990s, the building of 2 open-cycle gas turbines and co-generation with business, is expected to add 2,400 MW to total capacity by the end of 2009. Plans also include building a new generation of power stations, with the first due to come on stream in 2012. Eskom has started work on two new coal-fired power stations, and is considering bids from two overseas companies to build a new conventional nuclear power station. It also plans to aid completion of a hydro plant in KwaZulu-Natal. The Independent Power Company of Southern Africa has a contract to install an 18-MW gas-fired power plant in South Africa s KwaZulu-Natal province. This will be the first independent power plant in the province and will supply power to local businesses. The plant will be able to expand its capacity up to 55 MW, depending on the demand growth in the region.

In April 2008, Eskom began construction of the first of its new coal-fired stations, Medupi Power Station, in Limpopo. The Medupi Power Station will be South Africa s first greenfield coal-fired station to be built in more than 20 years. The first unit is scheduled for completion in 2012 with the entire station to be completed by 2015. It will have an installed capacity of approximately 4,800 MW. In August 2008, Eskom began construction of the second coal-fired power station, which will be completed by 2017. This new power plant, named Kusile Power Station, is situated close to the existing Kendal Power Station in the Witbank area. Kusile Power Station will be the first power station in South Africa to have flue gas desulphurization (FGD) installed. FGD is the state-of-the art technology used to remove oxides of sulfur (SOx), e.g. sulfur dioxide (SO2), from the exhaust flue gases in power plants that burn coal. Eskom is fitting FGD to the Kusile plant as an atmospheric emission abatement technology to ensure compliance with air quality standards.

The building of the first of a new generation of high-temperature helium gas-cooled nuclear reactors is also underway. The project could go a long way in helping to solve South Africa's current power problem by 2013. The project entails the building of a demonstration reactor at Koeberg and a pilot fuel plant at Pelindaba near Pretoria. The demonstration reactor design is complete, and construction is due to start in 2009, with the first fuel to be loaded four years later. If successful, another 10 plants could be built. The South African project will become the first commercial-scale high-temperature reactor in the world. It is supported by the government, Eskom, the Industrial Development Corporation, and U.S. companies Westinghouse and Exelon.

The new nuclear power plant will be built near the 1984-built Koeberg Power Station, which is the only nuclear power station on the African continent. It has operated safely for more than 21 years and efficiently for a decade and has a further active life of 30 - 40 years. The stations' two reactors currently supply 1,800 MW or 6 percent of South Africa's electricity needs.

### Sector Organization

State energy company Eskom is one of the largest utilities in the world and generates 95 percent of South Africa's electricity as well as two-thirds of the electricity for the African continent. It owns and operates the national transmission system. Eskom has 36,200 megawatts (MW) of net generating capacity, which is primarily coal-fired (32,100 MW). Eskom's network is made up of more than 300,000 km of power lines, 27,000 km of which constitute the national transmission grid.

Since about 90 percent of South Africa s electricity is produced from coal, the main generating stations are located in Mpumalanga, where there are vast coal reserves. In addition, Eskom operates the nuclear power station at Koeberg (1,800 MW), two gas turbine generators (340 MW), six conventional hydroelectric plants (600 MW), and two hydroelectric pumped-storage stations (1,400 MW). Eskom produces adequate electricity for domestic use and exports surplus power to Botswana, Lesotho, Mozambique, Namibia, Swaziland, and Zimbabwe. Additional electricity is generated by South African municipalities (2,400 MW), and private companies (800 MW).

The South African government has tried to initiate privatization in the electricity sector by selling a 30 percent stake of Eskom. As a result, Eskom management proposed a plan to integrate BEE companies and other private sector firms into the electricity sector without privatizing Eskom itself. The outcome was the Electricity Distribution Industry Restructuring Bill, which aims to merge Eskom s distribution assets with the country s municipal distributors to form six regional electricity distributors (REDS). Eskom will not hold a stake in the REDS; rather they will come under the umbrella of a government-controlled holding structure called EDI Holdings (EDI). In July 2005, the first RED (RED 1), became operational. RED 1 now controls the electricity distribution previously controlled by the Cape Town municipal authorities and Eskom.

The Integrated National Electrification Program (INEP) provides a socio-economic support net that ensures that previously unconnected households have access to electricity. The program creates new infrastructure while ensuring that existing infrastructure is rehabilitated and maintained. In rolling out the program, the department's policy is to ensure that communities become not only the recipients of basic services, but also participants in the economy through the BEE framework. The country's mass electrification program, started in 1991, has seen almost 3.5 million homes electrified. The government aims to achieve universal access to electricity by 2012.

# Quick Facts

## Energy Overview

| | |
|---|---|
| **Proven Oil Reserves (January 1, 2008E)** | 15 million barrels |
| **Oil Production (2007E)** | 199 thousand barrels per day, of which 8% was crude oil. |
| **Oil Consumption (2007E)** | 505 thousand barrels per day |
| **Crude Oil Refining Capacity (2008E)** | 485 thousand barrels per calendar day |
| **Proven Natural Gas Reserves (January 1, 2008E)** | 318 billion cubic feet |
| **Natural Gas Production (2006E)** | 102 billion cubic feet |
| **Natural Gas Consumption (2006E)** | 109 billion cubic feet |
| **Recoverable Coal Reserves (2007E)** | 54 billion short tons |
| **Coal Production (2007E)** | 283 million short tons |
| **Coal Consumption (2007E)** | 203 million short tons |
| **Electricity Installed Capacity (2005E)** | 40 gigawatts |
| **Electricity Production (2005E)** | 228 billion kilowatt hours |

| | |
|---|---|
| **Electricity Consumption (2005E)** | 211 billion kilowatt hours |
| **Total Energy Consumption (2005E)** | 5.0 quadrillion Btus*, of which Coal (75.4%), Oil (20.1%), Nuclear (2.8%), Natural Gas (1.6%), Hydroelectricity (0.1%), Other Renewables (0%) |
| **Total Per Capita Energy Consumption (2005E)** | 114 million Btus |
| **Energy Intensity (2005E)** | 10,006 Btu per $2000-PPP** |

## Environmental Overview

| | |
|---|---|
| **Energy-Related Carbon Dioxide Emissions (2005E)** | 424 million metric tons, of which Coal (82%), Oil (17%), Natural Gas (1%) |
| **Per-Capita, Energy-Related Carbon Dioxide Emissions (2005E)** | 9.6 metric tons |
| **Carbon Dioxide Intensity (2005E)** | 0.84 Metric tons per thousand $2000-PPP** |
| **Environmental Issues** | lack of important arterial rivers or lakes requires extensive water conservation and control measures; growth in water usage outpacing supply; pollution of rivers from agricultural runoff and urban discharge; air pollution resulting in acid rain; soil erosion; desertification |
| **Major Environmental Agreements** | party to: Antarctic-Environmental Protocol, Antarctic-Marine Living Resources, Antarctic Seals, Antarctic Treaty, Biodiversity, Climate Change, Climate Change-Kyoto Protocol, Desertification, Endangered Species, Hazardous Wastes, Law of the Sea, Marine Dumping, Marine Life Conservation, Ozone Layer Protection, Ship Pollution, Wetlands, Whaling signed, but not ratified: none of the selected agreements |

## Oil and Gas Industry

| | |
|---|---|
| **Organization** | State-owned Petroleum Oil and Gas Corporation (PetroSA) manages the licensing of oil and gas exploration in the country. |
| **Major Refineries (capacity, bbl/d)(2006E)(Source: SAPIA Annual Report 2006)** | Sapref (180,000), Enref (125, 000), Calref (100,000), Natref ( 108,000)-Synthetic Fuel Refineries, Sasol (150,000), PetroSA (45,000) |

* The total energy consumption statistic includes petroleum, dry natural gas, coal, net hydro, nuclear, geothermal, solar, wind, wood and waste electric power. The renewable energy consumption statistic is based on International Energy Agency (IEA) data and includes hydropower, solar, wind, tide, geothermal, solid biomass and animal products, biomass gas and liquids, industrial and municipal wastes. Sectoral shares of energy consumption and carbon emissions are also based on IEA data.
**GDP figures from OECD estimates based on purchasing power parity (PPP) exchange rates.

# Links

### EIA Links
EIA - Country Energy Profile South Africa

### U.S. Government
CIA World Factbook - South Africa
EIA International Energy Annual
U.S. State Department's Consular Information Sheet - South Africa

### General Information
MBendi Country Profile - South Africa

### Associations and Institutions
Chamber of Mines of South Africa

### Foreign Government Agencies
Department of Environmental Affairs and Tourism (DEAT)
Department of Minerals and Energy (DME)

**South African Energy Links**
Anglo
Energy Africa
Engen
Eskom
Petroleum Agency South Africa (PASA)
Petroleum, Oil and Gas Corporation of South Africa (PetroSA)
Sasol
South African Petroleum Industry Association (SAPIA)
South Africa Department of Minerals and Energy
Xstrata

## Sources

African Energy
Cedigaz
CIA World Factbook
Engen
Eskom
Factiva
Mbendi South Africa
Oil and Gas Journal
PetroSA
Pretoria News
Reuters
South Africa Info
South African Department of Minerals and Energy
South African Petroleum Industry Association (SAPIA)
U.S. Energy Information Administration

## Contact Info

cabs@eia.doe.gov
(202)586-8800
cabs@eia.doe.gov